

REMARKS

The applicant respectfully requests reconsideration in view of the amendment and the following remarks. In order to expedite prosecution, the applicant has incorporated claim 5 into claim 1.

The applicant had a telephone interview to clarify that they had three months to respond to the office action and not one month. The applicant appreciates that the Examiner clarified this for the applicant.

Claims 2-6 were rejected under 35 USC 112, first paragraph. Claims 1 and 9-12 were rejected under 35 USC 102 (b) as being anticipated by Horch et al. (DE 19542069) ("Horch"). Claims 7-8 were rejected under 35 USC 103 (a) as being obvious over Horch in view of Reinhardt US 5,807,781 ("Reinhardt"). The applicant respectfully traverses these rejections.

35 USC 112, First Paragraph Rejection

Claims 2-6 were rejected under 35 USC 112, first paragraph. Examiner is questioning whether the term "modulus in a silicatic binder ..." is enabled (see pages 4 and 5 of the Office Action). At page 4 of the Office Action, the Examiner refers to the applicant's Example 1. The Examiner has not correctly calculated the modulus in the silicatic binder because the Examiner has not considered the makeup of the waterglass. The correct calculation is as follows:

In example 1 a potassium waterglass 35 by Cognis Deutschland contains a complete solids content of around 35 %. Attached is a brochure of Cognis indicating the different waterglasses offered by Cognis. The used potassium waterglass has about 24 % by weight of SiO₂, about 11% by weight of K₂O and about 65 % by weight of water.

Example 1:

→56.1 g potassium waterglass 35 (= 100 % by weight)

This would break down as follows:

→13.46 g SiO₂ (24 % by weight x 56.1 g., molecular weight of SiO₂: 60.1 g/mol)

→6.17 g K₂O (11 % by weight x 56.1 g., molecular weight of K₂O: 94.2 g/mol)

→36.47 g H₂O (65 % by weight x 56.1 g., molecular weight of H₂O: 18.0 g/mol).

→13.46 g SiO₂ / 60.1 g/mole = 0.224 = 224 mmole

→6.7 g K₂O / 94.2 g/mole = 0.0655 mole = 65.5 mmole

→19.9 g of 50% strength silica sol contains 9.95 g SiO₂

→9.95 g SiO₂ = 0.165 mole = 165 mmole.

The reaction mixture contains 389 mmole SiO₂ and 65.6 mmole of K₂O

→Molar ratio of SiO₂/K₂O = 389 mmole/65.6 mmole = 5.94

5.94 rounds off to 6 as is stated in Example 1. For the above reasons, the applicant believes that the claims are enabled and this rejection should be withdrawn.

Prior art rejections

Claims 1 and 9-12 were rejected under 35 USC 102 (b) as being anticipated by Horch. Claims 7-8 were rejected under 35 USC 103 (a) as being obvious over Horch in view of Reinhardt. In order to expedite prosecution, the applicant has incorporated claim 5 into claim 1. The Examiner correctly did not reject claim 5 over these references. For the above reasons, these rejections should be withdrawn.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

A one month extension fee has been paid. Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 03-2775, under Order No. 13077-00100-US from which the undersigned is authorized to draw.

Dated: May 17, 2007

Respectfully submitted,

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3. Handelsformen

Insgesamt sind Natron- und Kaliwasserglas in drei Grundformen erhältlich, nämlich als Stückenglas, als Wasserglaslösung sowie als wasserlösliches Pulver. Innerhalb jeder dieser Grundformen gibt es verschiedene Sorten, so daß wir vielen Wünschen nach bestimmten Eigenschaften eines Wasserglasproduktes entsprechen können.

Im allgemeinen werden Stückerwasserglas und lösliche, pulverförmige Wasserglassorten in den Grundzusammensetzungen „neutral“ und

„alkalisch“ geliefert. Die flüssigen Wasserglassorten dagegen werden in einer breiten Palette von Lösungen geliefert, welche sich in Kieselsäure/Alkali-Verhältnis und Dichte unterscheiden. Die Dichte wird im allgemeinen so bemessen, daß die Wasserglaslösungen bei den üblichen Temperaturen ohne Schwierigkeiten gepumpt werden können. Eine höhere Konzentration würde die Verwendung der Flüssiggäser bei normaler Temperatur infolge zu hoher Viskosität erschweren.

Herstelltoleranzen der wichtigsten Wasserglassorten:

Natron-Wasserglaslösungen	Sorte	HK 30	37/40	37/40 PE	40/42	43/45	47/48	48/50	50/52	58/60
	Dichte in kg/m ³	1255-1270	1345-1355	1365-1375	1390-1405	1435-1460	1490-1505	1505-1520	1545-1560	1690-1710
	Gewichtsverhältnis	3,70-3,90	3,30-3,40	3,30-3,40	3,30-3,40	3,02-3,10	2,58-2,62	2,70-2,80	2,37-2,42	2,00-2,06
	Viskosität mPa·s/20°C	10-30	50-100	100-200	400-600	800-1500	350-450	1500-2500	1400-2000	über 10000
	% H ₂ O	70,8-72,6	64,8-65,6	63,2-64,6	61,2-62,4	57,3-58,9	55,8-57,2	53,7-55,3	51,9-53,6	44,6-46,2
	% SiO ₂	21,6-23,2	25,6-27,0	27,2-28,5	29,0-29,8	31,1-32,1	33,0-34,0	34,5-35,5	36,0-37,0	38,0-39,0

Kali-Wasserglaslösungen	Sorte	28/30	35	40	Mörsil H
	Dichte in kg/m ³	1250-1260	1320-1330	1380-1395	1410-1420
	Gewichtsverhältnis	2,50-2,60	2,18-2,24	2,08-2,12	1,80-1,88
	Viskosität mPa·s/20°C	20-70	35-50	850-1050 bei 25°C	40-50
	% H ₂ O	70,3-71,8	64,4-66,1	59,6-61,0	58,1-59,7
	% SiO ₂	20,4-21,1	23,5-24,5	25,5-26,5	27,0-28,0

Außer den vorgenannten Sorten stellen wir eine Reihe von Spezialwasserglaslösungen her sowie verschiedene

modifizierte Natron- und Kaliwasserglaslösungen.